

~~extending passages formed in said core for selectively communicating pressurized air to  
said surface of said core and~~

~~wherein said sleeve is formed of an expandable material such that when  
pressurized air is passed to said surface of said core, said sleeve expands so as to be  
displaceable with respect to said core.--~~

REMARKS

Filed concurrently herewith is a Request for Three Month Extension of Time which extends the shortened statutory period for response to December 8, 1999. Accordingly, Applicants respectfully submits that this response is being timely filed.

The Examiner's Action dated June 8, 1999 has been received and its contents carefully noted. In view thereof, new claims 75, 76 and 77 have been added in order to better define that which Applicants regard as the invention. Accordingly, claims 1-12, 18-21, 33-43, 49-63, 69-72 and 75-77 are presently pending in the instant application.

Referring now to the Official Action and particularly page 2 thereof, claims 1, 2, 8, 9, 12, 18, 19, 33, 34, 49, 50, 53, 54, 60, 63 and 69-72 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,731,620 issued to Klemmer in view of U.S. Patent No. 4,685,393 issued to Saueressig and European Patent No. 181726. This rejection is respectfully traversed in that the combination proposed by the Examiner neither discloses nor remotely suggests that which is presently set forth by Applicants' claimed invention. Furthermore, the requisite motivation for combining the references in the manner suggested by the Examiner is not present.

In rejecting Applicants' claimed invention, the Examiner notes that the Klemmer reference fails to disclose in detail how the embossing sleeve is releaseably mounted on the roller core. The Examiner notes that the Klemmer reference teaches the concept of using a releaseably attached sleeve with an engraved pattern thereon on an embossing roller core so as to facilitate the replacement of the engraved sleeve without having to remove the entire embossing roller from the machine. However, as is noted by the Examiner, there is no disclosure or suggestion in the Klemmer reference as to how the engraved sleeve is maintained in position with respect to the embossing roll. It is noted, however, that with the device set forth by Klemmer, the embossing sleeve would be formed of steal and maintained on the embossing roll 24 by way of bolts or screws. It has been noted, however, in mounting the sleeve in this manner, due to the excessive pressures exerted during an embossing process in the range of 100 to 120 pli, these bolt holes become skewed and consequently, the sleeve slips with respect to the roll on which it is locked. In this regard, Applicants have set forth and claimed a mechanism which allows embossing sleeves to be confidently utilized in an embossing process.

In rejecting Applicants' claimed invention, the Examiner relies on the teachings of Saueressig as teaching the use of a roller sleeve positioning means for releaseably attaching a printing sleeve on to a roller core using pressurized gas. Further, the Examiner relies on the teachings of European Patent No. 181726 as teaching a printing roller with a detachable sleeve including a keyway. It is noted, however, that each of the secondary references sited by the Examiner are specifically directed to roller sleeves utilized in an printing process and not an embossing process as is specifically set forth by Applicants' claimed invention. As is noted on page 3 of the Office Action, the Examiner

recites that the teaching of mounting and removing a roller sleeve to and from a roller core by Saueressig has applications for printing rollers, pressure rollers, transfer rollers, platen rollers as well as any type of rollers having a removably mounted sleeve thereon, however, the Examiner provides no basis for this assertion. Particularly, the patent to Saueressig is silent with respect to these various applications as suggested by the Examiner. Accordingly, it is unclear where in the teachings of the Saueressig reference the Examiner has deduced that Saueressig has applications for printer rollers, pressure rollers, transfer rollers, platen rollers or other types of rollers having removably mounted sleeves as suggested by the Examiner. Clearly, there is no teaching in the Saueressig reference of such applications.

It is well settled that when deciding whether a reference is from a relevant art, we must first determine whether the reference is within the inventor's field of endeavor and if it is not, we must determine whether the reference is reasonably pertinent to a particular problem confronting the inventor. *In re GPAC, Inc.*, 57F3d, 1573, 35USPQ2d, 116 (Fed. Circuit 1995). In the instant case, the present invention is directed to an embossing apparatus or system for embossing a substantially continuous web. The factors dictating the manufacture and use of embossing sleeves in an embossing process are significantly different than those associated with printing processes. Accordingly, those concerned with the embossing of a substantially continuous web of material and the parameters associated therewith would not turn to printing processes as suggested by the Examiner. Furthermore, the problems confronting inventors in connection with embossing processes are significantly different than that of those encountered in the printing field and consequently, the reference is not reasonably pertinent to the particular problem confronting the inventors in

connection with the claimed invention. That is, as noted hereinabove, when embossing a material, the embossing roller and backup roller come into intimate contact with one another and create a nip therebetween exerting forces in excess of 100 to 120 pli which, when compared to a pli of 1 to 5 for printing processes, clearly the problem confronting the inventors in connection with the present application is nothing like the problem facing those working in the printing art. Accordingly, it is respectfully submitted that the patents to Saueressig and Julian as well as European Patent No. 181726 are not analogous to the presently claimed invention. Moreover, the Examiner's statement that embossing is part of the printing art and that the Saueressig reference is applicable to rollers other than printing rollers has no foundation. Therefore, in view of the foregoing it is respectfully submitted that the combination of Klemmer in view of Saueressig and the European patent is not well founded and fails to render Applicants' claimed invention obvious.

Referring now to page 3 of the Office Action, claims 20, 21, 51, 52, 71 and 72 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Klemmer in view of Saueressig and the European patent as applied to claims 1, 33 and 53 and further in view of the teachings of U.S. Patent No. 4,144,813 issued to Julian. Again, this rejection is respectfully traversed in that the combination proposed by the Examiner fails to disclose or suggest that which is presently set forth by Applicants' claimed invention. Moreover, the requisite motivation for compiling the references in the manner suggested by the Examiner is not present.

As noted hereinabove, the patent to Julian is directed to printing sleeves and as specifically discussed hereinabove, is not analogous to that set forth by Applicants' claimed invention. While the core and printing sleeve of Julian are tapered in order to aid in the manipulation of the sleeve on

to the core, this reference is directed to printing processes and nowhere discloses nor suggests its applicability to the embossing art wherein the force exerted on the sleeve and core are 100 or more times that experienced in printing processes. Accordingly, it is respectfully submitted that the teachings of Julian are not analogous to that set forth by Applicants' claimed invention and claims 20, 21, 51, 52, 71 and 72 are likewise believed to be in condition for allowance for the reasons discussed hereinabove.

With reference to page 4 of the Office Action, claims 3-7, 35-40 and 55-59 have been rejected as being unpatentable over Klemmer in view of Saueressig and the European patent as applied to claims 1, 33 and 53 and further in view of U.S. Patent No. 5,266,257 issued to Kildune. Again, this rejection is respectfully traversed in that the patent to Kildune does nothing to overcome the aforementioned shortcomings associated with the prior combination.

As the Examiner can clearly appreciate, the patent to Kildune fails to disclose or remotely suggest the use of removable embossing sleeves provided on a core. The embossing rolls formed in accordance with that disclosed by Kildune are not sleeves which are removable and replaceable as is specifically recited by Applicants' claimed invention. Accordingly, it is respectfully submitted that the Kildune does nothing to overcome the aforementioned shortcomings associated with the prior combination proposed by the Examiner.

Referring now to page 5 of the Office Action, claims 10, 11, 41-43, 61 and 62 have been rejected as being unpatentable over Klemmer in view of the prior art as applied to claims 9, 40 and 60 and further in view of the teachings of U.S. Patent No. 3,404,254 issued to Jones. Again, this rejection is respectfully traversed in that the patent to Jones does nothing to overcome the

aforementioned shortcomings associated with the proposed combination. Moreover, Jones fails to disclose or even remotely suggest that which is recited by Applicants' claimed invention.

While the Examiner is correct in stating that the patent to Jones discloses a method and apparatus for engraving rolls, this reference clearly fails to disclose or even remotely suggest the use of a three-dimensional laser engraving process in order to engrave such rolls. That is, as is specifically recited by Applicants' claimed invention, the embossing pattern is engraved by way of three dimensional laser engraving wherein the embossing pattern includes embossing elements having curvilinear sidewalls, spherical surfaces and multiple elevations with respect to a reference surface which is not possible with the process set forth by Jones. It is noted, that the Examiner has rejected claims 12 and 63 in the initial rejection set forth on page 2, however, each of these claims depend from dependent claims 11 and 62, respectively, which are not rejected in the initial rejection set forth in the Official Action. Again, clearly the patent to Jones fails to disclose a three dimensional laser engraving process and moreover, fails to disclose or remotely suggest a particular configuration of the embossing elements set forth by Applicants' claimed invention.

The Examiner is of the position that the broadly recited embossing pattern includes embossing elements having various shapes, since the particular laser engraving technique on the embossing sleeve is not disclosed and claimed as part of the present invention the various shapes of the embossing elements in the embossing pattern are considered as a design preference based on the embossed images desired to be obtained. This is clearly erroneous. In Applicants' specification, the particular process, that being a three dimensional laser engraving process is explained in detail. Moreover, Applicants' specification specifically discusses the particular configurations with

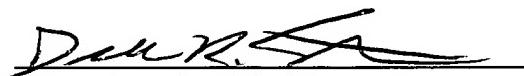
reference to Figs. 6A, 6B, 7 and 7A- 7F specifically discloses a particular feature of the present invention and Applicants' claimed invention also specifically claims these features. Such features are clearly not merely design preference based on the embossing images desired to be obtained. These embossing images cannot be obtained by that disclosed by Jones.

With respect to new claims 75-77, these claims have been added in order to more clearly define that which Applicants regard as the invention. Again, given the non-analogous nature of the secondary references cited by the Examiner, it is respectfully submitted that these claims, likewise, distinguish over the prior art of record and are in condition for allowance.

Therefore, in view of the foregoing it is respectfully requested that the objections and rejections of record be reconsidered and withdrawn by the Examiner, that claims 1-12, 18-21, 33-43, 49-63, 69-72 and 75-77 be allowed and the application be passed to issue.

Should the Examiner believe a conference would be of benefit in expediting the prosecution of the instant application, he is hereby invited to telephone council to arrange such a conference.

Respectfully submitted,



Donald R. Studebaker  
Reg. No. 32,815

Sixbey, Friedman, Leedom & Ferguson, P.C.  
8180 Greensboro Drive, Suite 800  
McLean, Virginia 22102  
(703) 790-9110